Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A method for controlling a fuel cell system, the system comprising:

a reformer provided with a reform reaction flow channel for generating anode gas containing hydrogen from reform-subject fuel;

a fuel cell provided with an anode flow channel to which the hydrogen contained in the anode gas is supplied by supplying the anode gas from the reform reaction flow channel, a cathode flow channel to which a cathode gas containing oxygen is supplied, and an electrolytic body arranged between the cathode flow channel and the anode flow channel;

a fuel pump for supplying the reform-subject fuel to the reform reaction flow channel;

supplied fuel quantity detecting means for detecting a supplied fuel quantity, which indicates a quantity of the reform-subject fuel supplied by the fuel pump;

a cathode pump for supplying the cathode gas to the cathode flow channel;

supplied cathode gas quantity detecting means for detecting a supplied cathode gas quantity, which indicates a quantity of the cathode gas supplied by the cathode pump;

generated power quantity detecting means for detecting a generated power quantity in the fuel cell; and

a control device for controlling a delivery of the reform-subject fuel by the fuel pump and a delivery of the cathode gas by the cathode pump so that the generated power quantity may be equal to a requested generation power quantity which is necessary to operate a load utilizing power generated by the fuel cell, wherein:

a cathode offgas line for sending the cathode offgas released from the cathode flow channel to the reform reaction flow channel is connected to the cathode flow channel; and

the method comprising:

a reformed carbon quantity calculation step for obtaining a reformed carbon quantity C, which indicates a quantity of carbon supplied to the reform reaction flow channel, based on the supplied fuel quantity;

a reformed oxygen quantity calculation step for obtaining a consumed oxygen quantity, which indicates a quantity of oxygen contained in the cathode gas consumed to generate power in the fuel cell, from the generated power quantity and also obtaining a supplied oxygen quantity, which indicates a quantity of oxygen supplied to the cathode flow channel, from the supplied cathode gas quantity and then obtaining the residual oxygen quantity in the cathode offgas by subtracting the consumed oxygen quantity from the supplied oxygen quantity and obtaining a reformed oxygen quantity O, which indicates a quantity of oxygen supplied to the reform reaction flow channel, based on the residual oxygen quantity; and

a reformed carbon quantity correction step for correcting the reformed carbon quantity C by changing the delivery of the fuel pump so that O/C, which is a proportion of the reformed oxygen quantity O against the reformed carbon quantity C, may be kept in a target range.

2. (Original) The method for controlling a fuel cell system according to claim 1, the method further comprising:

a reformed water quantity calculation step for obtaining a quantity of generated water, which is a quantity of water generated in the cathode flow channel obtained by generation in the fuel cell, based on the generated power quantity, and obtaining a reformed water quantity S, which is a quantity of water supplied to the reform reaction flow channel, based on the quantity of generated water; and

when correcting the reformed carbon quantity C with changing a delivery of the fuel pump in the reformed carbon quantity correction step, keeping also S/C, which is a proportion of the reformed water quantity S against the reformed carbon quantity C, in a target range.

3. (Original) The method for controlling a fuel cell system according to claim 2, the method further comprising:

a generated power quantity recovery step for:

performing the reformed carbon quantity calculation step, the reformed oxygen quantity calculation step, the reformed water quantity calculation step and the reformed carbon quantity correction step, if the fuel cell system encounters an abnormality to lower the generated power quantity below the requested generation quantity, and

increasing a delivery of the fuel pump and increasing the reformed carbon quantity C depends on an increase of the reformed oxygen quantity O due to a decrease in the generated power quantity, so that the above-described O/C may fall in the target range and the generated power quantity is recovered to meet the requested generation quantity.

4. (Original) The method for controlling a fuel cell system according to claim 3, the method further comprising a step in the generated power quantity recovery step for limiting an increase of a delivery in the fuel pump so that the above-described S/C may not be 1 or less, when increasing the delivery of the fuel pump.

5. (Original) The method for controlling a fuel cell system according to claim 4, wherein the reformer is provided with a heating flow channel which is formed adjacent to the reform reaction flow channel, to perform burning reaction so that this reform reaction flow channel may be heated; and

the method further comprising a step in the generated power quantity recovery step for suppressing burning reaction in the heating flow channel if a delivery of the fuel pump cannot be increased because the above-described S/C may be 1 or less.

6. (Original) The method for controlling a fuel cell system according to claim 2, the method further comprising:

a generated power quantity following step for, if the requested generation power quantity is changed to increase, re-determining to increase a delivery of the fuel pump and that of the cathode pump, on the other hand, if the requested generation power quantity is changed to decrease, re-determining to decrease a delivery of the fuel pump and that of the cathode pump, thereby causing the generated power quantity to follow the requested generation quantity; and

an O/C correction step for, after performing the reformed carbon quantity calculation step, the reformed oxygen quantity calculation step, and the reformed water quantity calculation step again after this generated power quantity following step is performed, if the above-described O/C is above the target range, increasing the delivery of the fuel pump and correcting the reformed carbon quantity C to increase so that this O/C may be returned into the target range, on the other hand, if the above-described O/C is below the target range, decreasing the delivery of the fuel pump and correcting the reformed oxygen quantity C to decrease so that this O/C may be returned into the target range.

7. (Original) The method for controlling a fuel cell system according to claim 6, the method further comprising a step in the O/C correction step for limiting an increase of a delivery of the fuel pump so that the above-described S/C may not be 1 or less, when increasing the delivery of the fuel pump.

8. (Original) The method for controlling a fuel cell system according to claim 7, wherein the reformer is provided with the heating flow channel which is formed adjacent to the reform reaction flow channel, to perform burning reaction so that this reform reaction flow channel may be heated; and

the method further comprising a step in the O/C correction step for suppressing burning reaction in the heating flow channel if a delivery of the fuel pump cannot be increased because the above-described S/C may be 1 or less.

9. (Original) A fuel cell system comprising:

a reformer provided with a reform reaction flow channel for generating anode gas containing hydrogen from reform-subject fuel;

a fuel cell provided with an anode flow channel to which the hydrogen contained in the anode gas is supplied by supplying the anode gas from the reform reaction flow channel, a cathode flow channel to which a cathode gas containing oxygen is supplied, and an electrolytic body arranged between the cathode flow channel and the anode flow channel;

a fuel pump for supplying the reform-subject fuel to the reform reaction flow channel;

supplied fuel quantity detecting means for detecting a supplied fuel quantity, which indicates a quantity of the reform-subject fuel supplied by the fuel pump;

a cathode pump for supplying the cathode gas to the cathode flow channel;

supplied cathode gas quantity detecting means for detecting a supplied cathode gas quantity, which indicates a quantity of the cathode gas supplied by the cathode pump;

generated power quantity detecting means for detecting a generated power quantity in the fuel cell; and

a control device for controlling a delivery of the reform-subject fuel by the fuel pump and a delivery of the cathode gas by the cathode pump so that the generated power quantity may be equal to a requested generation power quantity which is necessary to operate a load utilizing power generated by the fuel cell, wherein:

a cathode offgas line for sending the cathode offgas released from the cathode flow channel to the reform reaction flow channel is connected to the cathode flow channel; and

the control device is configured to perform:

a reformed carbon quantity calculation step for obtaining a reformed carbon quantity C, which indicates a quantity of carbon supplied to the reform reaction flow channel, based on the supplied fuel quantity;

a reformed oxygen quantity calculation step for obtaining a consumed oxygen quantity, which indicates a quantity of oxygen contained in the cathode gas consumed to generate power in the fuel cell, from the generated power quantity and also obtaining a supplied oxygen quantity, which indicates a quantity of oxygen supplied to the cathode flow channel, from the supplied cathode gas quantity and then obtaining the residual oxygen quantity in the cathode offgas by subtracting the consumed oxygen quantity from the supplied oxygen quantity and obtaining a reformed oxygen quantity O, which indicates a quantity of oxygen supplied to the reform reaction flow channel, based on the residual oxygen quantity; and

a reformed carbon quantity correction step for correcting the reformed carbon quantity C by changing the delivery of the fuel pump so that O/C, which is a proportion of the reformed oxygen quantity O against the reformed carbon quantity C, may be kept in a target range.

10. (Original) The fuel cell system according to claim 9, wherein the control device is configured to:

perform also a reformed water quantity calculation step for obtaining a quantity of generated water, which is a quantity of water generated in the cathode flow channel obtained by generation in the fuel cell, based on the generated power quantity, and obtaining a reformed water quantity S, which is a quantity of water supplied to the reform reaction flow channel, based on the quantity of generated water; and

when correcting the reformed carbon quantity C with changing a delivery of the fuel pump in the reformed carbon quantity correction step, keep also S/C, which is a proportion of the reformed water quantity S against the reformed carbon quantity C, in a target range.

11. (New) A method for controlling a fuel cell system, the system comprising:

a reformer provided with a reform reaction flow channel for generating anode gas containing hydrogen from supplied reform-subject fuel;

a fuel cell provided with an anode flow channel to which the hydrogen contained in the anode gas is supplied by supplying the anode gas from the reform reaction flow channel, a cathode flow channel to which a cathode gas containing oxygen is supplied, and an electrolytic body arranged between the cathode flow channel and the anode flow channel;

a control device for controlling a quantity of the reform-subject fuel to the reform reaction flow channel and a quantity of the cathode gas to the cathode flow channel so that the generated power quantity in the fuel cell may be equal to a requested generation power quantity which is necessary to operate a load utilizing power generated by the fuel cell, wherein:

a cathode offgas line for sending the cathode offgas released from the cathode flow channel to the reform reaction flow channel is connected to the cathode flow channel; and

the method comprising:

a reformed carbon quantity correction step for correcting the reformed carbon quantity C by changing the quantity of the reform-subject fuel to the reform reaction flow channel so that O/C, which is a proportion of the reformed oxygen quantity 0 which indicates a quantity of oxygen supplied to the reform reaction flow channel against the reformed carbon

quantity C which indicates a quantity of carbon supplied to the reform reaction flow channel, may be kept in a target range.